

## IN THE CLAIMS:

Claims 1-5 (Cancelled).

6. (Previously presented) An ionic compound having a cation of the onium type with at least one heteroatom comprising N, O, S or P bearing the positive charge and the anion including, in whole or in part, at least one imide ion of the type  $(FX^1O)N^-(OX^2F)$  wherein  $X^1$  and  $X^2$  are the same or different and comprise SO or PF, wherein the compound comprises at least an anion selected from  $Cl^-$ ;  $Br^-$ ;  $I^-$ ;  $NO_3^-$ ;  $M(R^{10})_4^-$ ;  $A(R^{10})_6^-$ ;  $R^{11}YO_2^-$ ;  $R^{11}YONZ^{1-}$ ;  $R^{11}YOCZ^2Z^3^-$ ; 4,5-dicyano-1,2,3-triazole; 3,5-bis( $R_F$ )-1,2,4-triazole; tricyanomethane; pentacyanocyclopentadiene; pentakis(trifluormethyl)cyclopentadiene; and barbituric acid, and;

- M is B, Al, Ga or Bi;
- A is P, As and Sb;
- $R^{10}$  is a halogen;
- $R^{11}$  represents H, F, alkyl, alkenyl, aryl, arylalkyl, alkylaryl, arylalkenyl, alkenylaryl, dialkylamino, alkoxy or thioalkoxy, each having from 1 to 18 carbon atoms and being unsubstituted or substituted with one or more oxa, thia, or aza substituents, and wherein one or more hydrogen atoms are optionally replaced with halogen in a ratio of 0 to 100%, and eventually being part of polymeric chain;
- Y represents C, SO,  $S=NCN$ ,  $S=C(CN)_2$ ,  $PR^{11}$ ,  $P(NCN)R^{11}$ ,  $P(C(CN)_2)R^{11}$ , and when Y is  $P(NCN)R^{11}$  or  $P(C(CN)_2)R^{11}$ , then  $R^{11}YO_2$ ,  $R^{11}YONZ^1$ , and  $R^{11}YOCZ^2Z^3$  become  $R^{11}YO$ ,  $R^{11}YNZ^1$ , and  $R^{11}YCZ^2Z^3$ , respectively, an alkyl, alkenyl, aryl, arylalkyl, alkylaryl, arylalkenyl, alkenylaryl having from 1 to 18 carbon atoms and optionally substituted by one or more oxa, thia or aza; a dialkylamino group  $N(R^{11})_2$ ;
- $Z^1$ ,  $Z^2$ , and  $Z^3$  represent independently  $R^{11}$ ,  $R^{11}YO$  or CN, this group being optionally part of a polymeric chain.

Claims 7-25 (Cancelled).

26. (Currently amended) A method of using an electrolytic composition, comprising the step of:  
carrying out chemical or electrochemical reactions involving soluble species in a medium comprising said electrolytic composition,  
wherein said reactions are selected from Diels-Alder, Friedel-Craft, mixed aldolization, condensation, polymerization, nucleophilic substitution, and electrophilic substitution reactions,  
and wherein said electrolytic composition comprises at least one ionic compound of low melting point having a cation of the onium type with at least one heteroatom selected from such as N, O, S or P bearing the positive charge and the anion including, in whole or in part, at least one imide ion of the type  $(FX^1O)N^-(OX^2F)$ , wherein  $X^1$  and  $X^2$  are the same or different and comprise SO or PF~~in combination with at least another component comprising a metallic salt, a polar polymer and/or an aprotic co-solvent.~~

27. (Currently amended) The method according to claim 26, wherein the composition is used in combination with at least another component comprising a metallic salt, a polar polymer and/or an aprotic co-solvent ~~as a medium for Diels-Alder, Friedel-Craft, mixed aldolization, condensation, polymerization, nucleophilic substitution, and electrophilic substitution reactions.~~

28. (Previously presented) The method according to claim 26, wherein the composition comprises a chiral onium cation allowing enantionselective reactions.

29. (Withdrawn) A medium for chemical or electrochemical reactions involving soluble species present in said medium, comprising:  
at least one ionic compound of low melting point comprising a cation of the onium type having at least one heteroatom such as N, O, S or P carrying a positive charge; and

an anion including, in whole or in part, at least one imide ion of the type  $(FX^1O)N^-$  ( $OX^2F$ ), wherein  $X^1$  and  $X^2$  are the same or different and comprise SO or PF.

30. (Withdrawn) The medium according to claim 29, wherein the medium is used in combination with at least one other component selected from the group consisting of a metallic salt, a polar polymer, and an aprotic cosolvent.

31. (Withdrawn) The medium according to claim 29, wherein the medium is non-flammable.

32. (Withdrawn) The medium according to claim 29, wherein the medium is used to perform an organic chemistry reaction.

33. (Withdrawn) The medium according to claim 32, wherein the medium is used as a medium for a reaction selected from the group consisting of Diels-Alder, Friedel-Craft, mixed aldolisation, condensation, polymerization, nucleophilic substitution, and electrophilic substitution.

34. (Currently amended) A medium used to perform an organic chemistry reaction involving soluble species present in said medium, comprising:

at least one ionic compound of low melting point comprising a cation of the onium type having at least one heteroatom selected from N, O, S or P carrying a positive charge; and

an anion including, in whole or in part, at least one imide ion of the type  $(FX^1O)N^-$  ( $OX^2F$ ), wherein  $X^1$  and  $X^2$  are the same or different and comprise SO or PF, and wherein such medium is optionally used in combination with at least one other component selected from the group consisting of a metallic salt, a polar polymer, and an aprotic cosolvent.

and ~~The medium according to claim 32,~~ wherein the medium comprises at least one chiral onium cation allowing enantioselective reactions.

35. (Currently amended) A medium used to perform an organic chemistry reaction involving soluble species present in said medium, comprising:  
at least one ionic compound of low melting point comprising a cation of the onium type having at least one heteroatom selected from N, O, S or P carrying a positive charge; and  
an anion including, in whole or in part, at least one imide ion of the type  $(FX^1O)N^-(OX^2F)$ , wherein  $X^1$  and  $X^2$  are the same or different and comprise SO or PF,  
and wherein such medium is optionally used in combination with at least one other component selected from the group consisting of a metallic salt, a polar polymer, and an aprotic cosolvent.  
~~and The medium according to claim 32,~~ wherein the medium comprises at least one catalytic species.

36. (Previously presented) The medium according to claim 35, wherein the catalytic species is at least one of the group consisting of an alkaline metal salt, a transition metal salt, a rare earth metal salt, and an organometallic salt.

37. (Previously presented) The medium according to claim 36, wherein the catalytic species is coordinated with one or more ligands.

38. (Previously presented) The medium according to claim 36, wherein the organometallic salt is a metallocene.

39. (Previously presented) The medium according to claim 37, wherein the one or more ligands are selected from the group consisting of bipyridines, porphyrines, phosphines, and arsines.

40. (Withdrawn) The medium according to claim 32, wherein the organic chemistry reaction is performed in a biphasic system.

41. (Withdrawn) The medium according to claim 29, wherein the medium is used as an antistatic medium.

42. (Withdrawn) The medium according to claim 41, wherein the antistatic medium is used as an antistatic coating.

43. (Withdrawn) An electrochemical device having at least two electrodes and one electrolyte, said electrolyte comprising at least one salt dissolved in at least one ionic compound of low melting point, comprising:

a cation of the onium type with at least one heteroatom such as N, O, S or P carrying a positive charge; and

an anion including, in whole or in part, at least one imide ion of the type  $(FX^1O)N^-(OX^2F)$ , wherein  $X^1$  and  $X^2$  are the same or different and comprise SO or PF.

44. (Currently amended) The electrochemical device according to claim [[43]] 45, wherein said device is used as an electrochemical generator, said generator comprising one negative and one positive electrode, wherein

said one negative electrode comprises a compound selected from the group consisting of lithium or an alloy thereof, a carbon insertion compound such as petroleum coke or graphite, a low insertion potential oxide ( $< 2$  Volts vs  $Li^+/Li^0$ ) such as titanium spinel  $Li_{4-x+3y}Ti_{5-x}O_{12}$  ( $0 \leq x, y \leq 1$ ), a double nitride of a transition metal and lithium such as  $Li_{3-x}Co_zN$  ( $0 \leq z \leq 1$ ), a compound having a structure of the antifluorite type such as  $Li_3FeN_2$  or  $Li_7MnN_4$ , and mixtures thereof; and

said one positive electrode comprises a compound selected from the group consisting of  $VO_x$  ( $2 \leq x \leq 2.5$ ), mixed oxides of lithium and vanadium such as  $LiV_3O_8$ ; a double oxide of cobalt and lithium that is optionally partially substituted by at least one cation M and has a general formula  $Li_{1-\alpha}Co_{1-x+y}Ni_xAl_y$  ( $0 \leq x+y \leq 1$ ;  $0 \leq \alpha \leq 1$ ), wherein  $M=Li, Mg, Al, Cr, Ni, Co, Cu, Ni, Fe$ , a double phosphate of the olivine or Nasicon structure such as  $Li_{1-\alpha}Fe_{1-x}Mn_xPO_4$ ,  $Li_{1-x+2\alpha}Fe_2P_{1-x}Si_xO_4$  ( $0 \leq x, \alpha \leq 1$ ), a rhodizonic acid salt, a

polydisulfide derived from the oxidation of dimercaptoethane-2,5-dimercapto-1,3,4-thiadiazole-2,5-dimercapto-1,3,4-oxadiazole-1,2-dimercaptocyclobutene-3,4-dione; and mixtures thereof.

45. (Currently amended) An electrochemical device having at least two electrodes and one electrolyte, said electrolyte comprising at least one ionic compound of low melting point, comprising:

a cation of the onium type with at least one heteroatom selected from N, O, S or P carrying a positive charge; and

an anion [A] including, in whole or in part, at least one imide ion of the type  $(FX^1O)N^-(OX^2F)$ , wherein  $X^1$  and  $X^2$  are the same or different and comprise SO or PF,

and The electrochemical generator according to claim 44, wherein the electrolyte comprises at least one anion [B] selected from the group consisting of  $Cl^-$ ;  $Br^-$ ;  $I^-$ ;  $NO_3^-$ ;  $M(R^{10})_4^-A(R^{10})_6^-$ ;  $R^{11}YO_2^-$ ;  $[R^{11}YONZ^1]^-$ ;  $[R^{11}YOCZ^2Z^3]^-$ ;  $(R^{11})_2PO_2^-$ ;  $(R^{11})_2P(NCN)O^-$ ;  $(R^{11})_2P(C(CN)_2)O^-$ ;  $[(R^{11})_2PONZ^1]^-$ ;  $[(R^{11})_2P(NCN)NZ^1]^-$ ;  $[(R^{11})_2P(C(CN)_2)NZ^1]^-$ ; 4,5-dicyano-1,2,3-triazole; 3,5-bi[x]s(Rf)-1,2,4-triazole; tricyanomethane; pentacyanocyclopentadiene; pentakis(trifluormethyl)cyclopentadiene; barbituric acid; and Meldrum acid derivatives and their substitution products, wherein

M is B, Al, Ga or Bi;

A is P, As and Sb;

$R^{10}$  is a halogen;

$R^{11}$  represents independently H, F, alkyl, alkenyl, aryl, arylalkyl, alkylaryl, arylalkenyl, alkenylaryl, dialkylamino, alkoxy or thioalkoxy, each having from 1 to 18 carbon atoms and being unsubstituted or substituted with one or more oxa, thia, or aza substituents, and wherein one or more hydrogen atoms are optionally replaced with halogen in a ratio of 0 to 100%, and eventually being part of polymeric chain;

Y represents C, SO, S=NCN, S=C(CN)<sub>2</sub>, an alkyl, alkenyl, aryl, arylalkyl, alkylaryl, arylalkenyl, alkenylaryl having from 1 to 18 carbon atoms and optionally substituted by one or more oxa, thia, or aza, or a dialkylamino group  $N(R^{10})_2$ ; and

$Z^1$  to  $Z^3$  represent independently  $R^{11}$ ,  $R^{11}YO$ ,  $(R^{11})_2PO$ ,  $(R^{11})_2P(NCN)$ ,  $(R^{11})_2P(C(CN)_2)$  or  $CN$ , wherein this group is optionally part of a polymeric chain.

46. (Currently amended) The electrochemical device according to claim ~~[[43]]~~ 45, wherein the electrolyte comprises at least one salt of anion B with a cation of the metallic salt is selected from the group consisting of a proton, a cation of an alkaline metal, a cation of an alkaline-earth metal, a cation of a transition metal, and a cation of a rare earth metal.

47. (Currently amended) The electrochemical generator according to claim ~~[[44]]~~ 46, wherein at least one ~~metallic salt~~ is a lithium salt.

48. (Currently amended) The electrochemical device according to claim ~~[[43]]~~ 45, wherein said device is used as an electrical energy storage system of the supercapacitor type.

49. (Currently amended) The electrical energy storage system according to claim 48, wherein at least one electrode comprises carbon having a high specific surface area greater than 50 m<sup>2</sup>/gr.

50. (Previously presented) The electrical energy storage system according to claim 48, wherein at least one electrode comprises a conjugated polymer.

51. (Currently amended) The electrical energy storage system according to claim ~~[[48]]~~ 50, wherein both electrodes comprise a conjugated polymer having three degrees of oxidation.

52. (Previously presented) The electrical energy storage system according to claim 51, wherein the conjugated polymer is a phenyl-3-thiophene derivative.

53. (Withdrawn) The electrochemical device according to claim 43, wherein said device is used as a light modulation system of the electrochromic type and further comprises at least one electrochromic material, and wherein said electrolyte comprises at least one catalytic species selected from the group consisting of an alkaline metal salt, a transition metal salt, a rare earth metal salt, and an organometallic salt.

54. (Withdrawn) The light modulation system according to claim 53, wherein the electrochromic material is deposited on a transparent semiconductor layer, wherein said semiconductor layer comprises tin oxide or indium oxide on a glass or polymer substrate.

55. (Withdrawn) The light modulation system according to claim 54, wherein the electrochromic material is an oxide selected from the group consisting of molybdenum oxides, tungsten oxides, titanium oxides, vanadium oxides, niobium oxides, cerium oxides, tin oxides, and mixtures thereof.

56. (Withdrawn) The light modulation system according to claim 53, wherein the electrochromic material is dissolved in the electrolyte.

57. (Withdrawn) The light modulation system according to claim 56, wherein the electrolyte is gelified by a polymer.

58. (Currently amended) An electrochemical device having at least two electrodes and one electrolyte, said electrolyte comprising at least one ionic compound of low melting point comprising:

a cation of the onium type with at least one heteroatom selected from N, O, S or P carrying a positive charge; and

an anion including, in whole or in part, at least one imide ion of the type  $(FX^1O)N^-(OX^2F)$ , wherein  $X^1$  and  $X^2$  are the same or different and comprise SO or PF,



and ~~The electrochemical device according to claim 43,~~ wherein the electrolyte is impregnated in a porous membrane.

59. (Currently amended) The electrochemical device according to claim 58, wherein the ~~porous membrane is a polyolefin~~ electrolyte is used in combination with at least another component comprising a metallic salt, a polar polymer and/or an aprotic co-solvent.

60. (New) An electrochemical device as in claim 45 wherein the electrolyte is impregnated in a porous membrane optionally in combination with at least another component comprising a metallic salt, a polar polymer and/or an aprotic co-solvent.

61. (New) The method according to claim 27, wherein the composition comprises a chiral onium cation allowing enantioselective reactions.